

United States Environmental Protection Agency Office of Environmental Measurement & Evaluation 11 Technology Drive North Chelmsford, MA 01863-2431

Laboratory Results

July 25, 2017

Danielle Gaito - Mail Code OEP06-4 Evan Lewis - Mail Code OEP06-1 US EPA New England R1

Project No: 17070012

Project: Merrymeeting River - Durham, NH Analysis: Ortho Phosphate in Water as P

EPA Chemist: Bhavita Patel

Date Samples Received by the Laboratory: 07/12/2017

Analytical Procedure:

All samples were received and logged in by the laboratory according to the USEPA New England Laboratory SOP for Sample Log-in.

Sample preparation and analysis was done following the EPA Region I SOP, EIASOP-INGTP11.

The SOP is based on the Lachat Method 10-115-01-1-B and EPA method 365.1 "Determination of Phosphorous by Semi-Automated Colorimetry", Revision 2.0, August 1993.

Samples were analyzed on a Lachat Automated Ion Analyzer.

Results relate only to the items tested or to the samples as received by the Laboratory. This analytical report shall not be reproduced except in full, without written approval of the laboratory.

Data were reviewed in accordance with the internal verification procedures described in the EPA New England Quality Manual for NERL.

If you have any questions please call me at 617-918-8340.

Sincerely,

Qualifiers: Page 2 of 6

- **RL** = Reporting limit
- **ND** = Not Detected above Reporting limit
- **NA** = Not Applicable due to high sample dilutions or sample interferences
- **NC** = Not calculated since analyte concentration is ND.
- J = Estimated value
- **J1** = Estimated value due to MS recovery outside acceptance criteria
- **J2** = Estimated value due to LFB result outside acceptance criteria
- **J3** = Estimated value due to RPD result outside acceptance criteria
- **J4** = Estimated value due to LCS result outside acceptance criteria
- \mathbf{E} = Estimated value exceeds the calibration range
- L = Estimated value is below the calibration range
- **B** = Analyte is associated with the lab blank or trip blank contamination. Values are qualified when the observed concentration of the contamination in the sample extract is less than 10 times the concentration in the blank.
- ${f R}={
 m No}$ recovery was calculated since the analyte concentration is greater than four times the spike level.
- ${f P}={f The}$ confirmation value exceeded 35% difference and is less than 100%. The lower value is reported.
- C =The identification has been confirmed by GC/MS.
- \mathbf{A} = Suspected Aldol condensation product.
- N =Tentatively identified compound.

US ENVIRONMENTAL PROTECTION AGENCY NEW ENGLAND LABORATORY

Merrymeeting River - Durham, NH

Ortho Phosphate in Water as P

Matrix: Water

Sample Number	Lab ID	Collected	Analysis	Concentration ug/L	RL ug/L	Qualifier
MM1-July Comments:	AB68285	07/12/2017 10:26	07/13/2017 11:14	ND	5	
PM01-July Comments:	AB68286	07/12/2017 10:35	07/13/2017 11:02	35	5	
PM02-July Comments:	AB68287	07/12/2017 10:47	07/13/2017 11:04	7.9	5	
MM2-July Comments:	AB68288	07/12/2017 11:02	07/13/2017 11:05	ND	5	
MM3-July Comments:	AB68289	07/12/2017 11:15	07/13/2017 11:09	7.5	5	
DUP02-July Comments:	AB68290	07/12/2017 0:00	07/13/2017 11:10	35	5	
Blank Comments:			07/13/2017 12:57	ND	5	

US ENVIRONMENTAL PROTECTION AGENCY NEW ENGLAND LABORATORY

Merrymeeting River - Durham, NH

MATRIX SPIKE (MS) Results

		SPIKE	SAMPLE	MS	MS	QC
		ADDED	CONCENTRATION	CONCENTRATION	%	LIMITS
SAMPLE ID	PARAMETER	ug/L	ug/L	ug/L	REC	(% REC)
AB68288	Ortho Phosphate in Water as P	97.8	ND	108	110	85 - 115

Comments:

MATRIX SPIKE DUPE (MSD) RESULTS

SAMPLE ID	PARAMETER	MSD SPIKE ADDED	MSD CONCENTRATION ug/L	MSD % REC	RPD %	QC LIMITS RPD
AB68288	Ortho Phosphate in Water as P	97.8	110	112	2	20

Comments:

Laboratory Duplicate Results

	SAMPLE RESULT	SAMPLE DUP RESULT	PRECISION RPD	QC LIMITS
SAMPLE ID PARAMETER	ug/L	ug/L	%	(%RPD)
AB68288 Ortho Phosphate in Water as P	ND	ND	NC	20

US ENVIRONMENTAL PROTECTION AGENCY NEW ENGLAND LABORATORY

Merrymeeting River - Durham, NH

Laboratory Fortified Blank (LFB) Results

	LFB AMOUNT SPIKED	LFB RESULT	LFB RECOVERY	QC LIMITS
PARAMETER	ug/L	ug/L	%	%
Ortho Phosphate in Water as P	97.8	102	104	90 - 110

Samples in Batch: AB68285, AB68286, AB68287, AB68288, AB68289, AB68290

REGION 1

CHAIN OF CUSTODY RECORD

Page 6 of 6

PROJ. NO. PROJECT NAME #70700/2 MERRYMECTING RIVER SAMPLERS: (Signature)						NO.			/		/			//				
W. Semus						OF			X/		Y	2/5	(V)			REMARKS		
STA. NO.	•		COMP.	GRAB		STATIO	N LOCATION	CON- TAINERS	\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\			/\^ \\						
	7/19/17	1026		X	MN	<u>.</u>	July	マ	X	Х	×	×	X					
	7/12/17			X			- July	ス	X	X	X	X	X					
	2/12/17	1047		X	PM	<u> </u>	- July	2	X	入	X	X	X				-	
	2/12/17	ハシ		ス	MN	13.	- July	2	X	X	K	人	χ				***************************************	
	2/17/17	1115		χ	MA	13	- July	3	X	X	X	X	X					
	חלמוב	لمسلأ		X	Dυ	02	- JV1 Y	2	X	1/2	X	X	X	-				
		•												-				
									ļ					-				
									ļ		ļ			-				
							***************************************	<u> </u>						-		 ;		
											 			-				
								-					_	-				
											-			-		A		Water-town and the second and the se
					·····			 					_					
Relinquish	ed by: (S	Signature)				/Time	Received by: (Signature)	Reli	nquis	hed b	y: (Si	gnatu	re)		Date /	Time	Received by: (Signature)
200	3			_	7/12										=		/	
Relinquished by: (Signature) Date / Time Received by: (Signature))	Heli	nquisi	ned b	y: (Sis	gnatu	re)		Date /	Time	Received by: (Signature)						
Relinquished by: (Signature) Date / Time Received for Laborator (Signature)				SESAI	Date / Time Remarks AT 7/12/17 13.50			ks V L , #	TP, BM	7.170 >	Preservacy HzSq pH<2							
170700)12 TP	Distr	ributio	n: Or	iginal Acco	mpanies Si	nipment: Copy to Coordina	tor Field File	\$		400	_	L	, _	- C ~	6 0		

17070012 OPHOS 17070012 \$TNL 17070012 AMMO 17070012 TSS

1- 20176